Supporting Information

Alternative Langmuir-Hinshelwood fittings of the experimental data.

Figure S1. Absolute PFOS sonolytic degradation rate plotted as a function of initial PFOS concentration fitted by the non-competitive Langmuir-Hinshelwood model: $V_{Max,app}^{-PFOS} = 230$ nM min^{-1}. (●) Experimental, (–) $K_{Sono}^{PFOS} = K_{Eq}^{PFOS}$, (–) $K_{Sono}^{PFOS} = 10 \times K_{Eq}^{PFOS}$ and (–) $K_{Sono}^{PFOS} = 100 \times K_{Eq}^{PFOS}$.

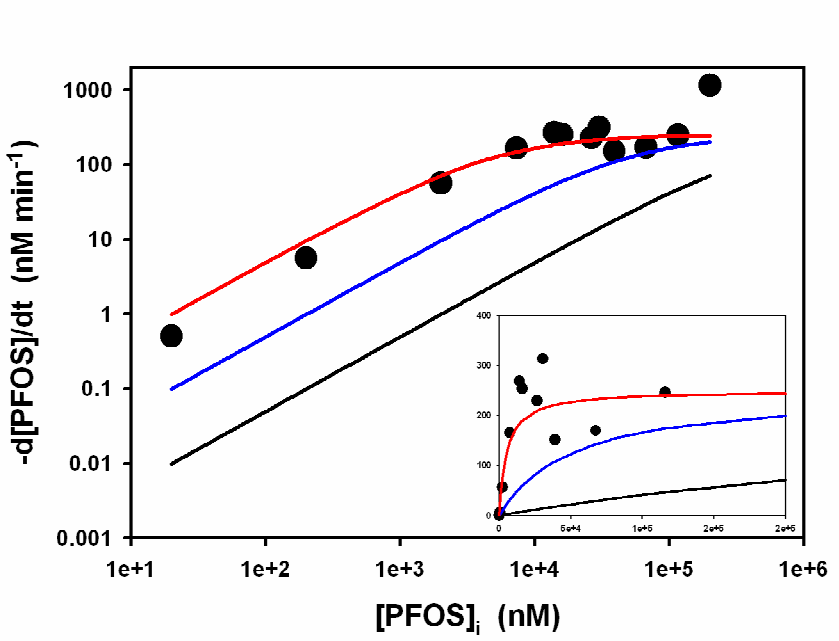

Figure S2. Absolute PFOS sonolytic degradation rate plotted as a function of initial PFOS concentration fitted by the competitive Langmuir-Hinshelwood model: $K_{Sono}^{PFOS} = K_{Eq}^{PFOS}$. (●) Experimental, (–) $V_{Max,app}^{-PFOS} = 230$ nM min^{-1}, (–) $V_{Max,app}^{-PFOS} = 2{,}300$ nM min^{-1} and (–) $V_{Max,app}^{-PFOS} = 23{,}000$ nM min^{-1}.

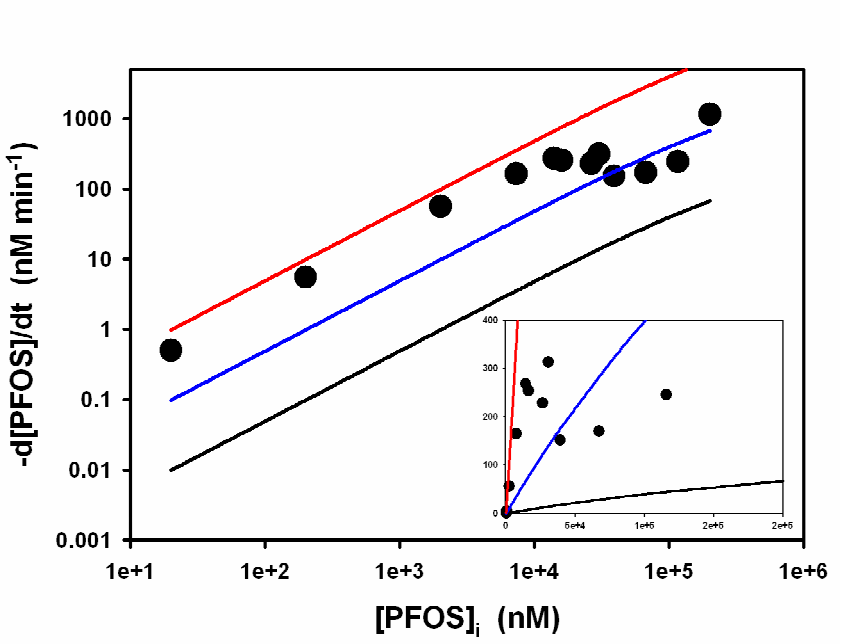

Figure S3. Absolute PFOA sonolytic degradation rate plotted as a function of initial PFOA concentration fitted by the non-competitive Langmuir-Hinshelwood model: $V_{Max,app}^{-PFOA} = 240$ nM min^{-1}. (●) Experimental, (–) $K_{Sono}^{PFOA} = K_{Eq}^{PFOA}$, (–) $K_{Sono}^{PFOA} = 10 \times K_{Eq}^{PFOA}$ and (–) $K_{Sono}^{PFOA} = 100 \times K_{Eq}^{PFOA}$.

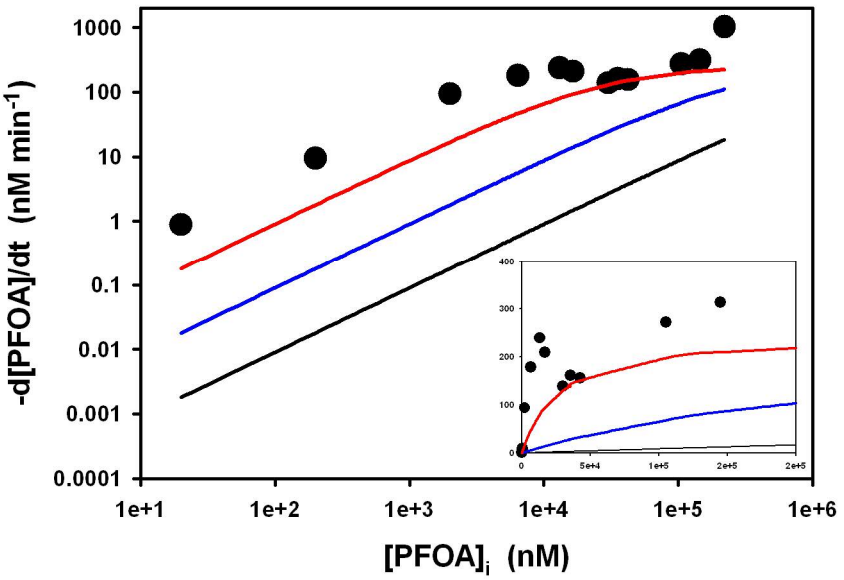

Figure S4. Absolute PFOA sonolytic degradation rate plotted as a function of initial PFOA concentration fitted by the non-competitive Langmuir-Hinshelwood model: $V_{Max,app}^{-PFOA}$ = 2,230 nM min^{-1}. (●) Experimental, (–) $K_{Sono}^{PFOA} = K_{Eq}^{PFOA}$, (–) $K_{Sono}^{PFOA} = 10 \times K_{Eq}^{PFOA}$ and (–) $K_{Sono}^{PFOA} = 100 \times K_{Eq}^{PFOA}$.